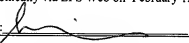


**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re the application of:	)	Attorney Docket No. 7175-004US
<b>Jacques M. Dulin</b>	)	Group Art Unit: 1614
Serial No.: 10/700,784	)	Examiner: Leslie A. Royds
Filed: November 3, 2003	)	Date of E-Filing: February 12, 2007
Title: <b>Oral Hygiene System and</b>	)	<b>Phone: 571 - 272 - 6096</b>
<b>Method of Treatment</b>	)	<b>Fax Phone: 571 - 273 - 8300</b>

Certification under 37 CFR 1.6	12 Pages
I hereby certify that this paper is being filed electronically via EFS Web on February 12, 2007..	
Name: Betty Oppenheimer	Signature: 

**Rule 132 Declaration of Dr. Milo R. Novotny**

I, **Milo R. Novotny, DDS**, the undersigned, on penalty of perjury, state and declare as follows:

1) I am a practicing Dentist with more than 45 years experience in the field of oral hygiene, and I make this declaration in support of the factual basis for patentably distinguishing claims of this application over the references cited of record under 35 US Code Section 103. My educational and experience background is set forth in my attached CV, incorporated herewith.

2) Based on my long experience and training in the field of oral hygiene, I am qualified to fairly assess the level of ordinary skill in the art of treatment of bad breath and gingivitis. I am qualified to state what would or would not be obvious to one of ordinary skill in this art.

3) I am familiar with the above-identified application and the medication delivery platform system disclosed therein, having been consulted by the inventor from the inception of the inventive combination, and having had discussions with the inventor in connection with the Examiner's analysis of it. I am also familiar with the references of Masci (1964) 3,147,182; Vermeer 5,624,906 (1997); Wiesel 6,287,320 (2001); Julius 4,071,953 (1978); Speaker 4,917,892 (1990); and Copelan 5,133,971 (1992) that are applied against claims 1-4 and 6 - 15, presently pending in this application. I have analyzed them and understand them.

4) At first I was skeptical whether the delivery system of the invention would work. I had been fully trained by the liquid mouthwash industry, that the only effective day-to-day oral

hygiene was to rinse the mouth out with a half-cupful of mouthwash, holding it in the mouth as long as possible, which meant on the order of 20 – 30 seconds. The TV commercials showing a boric acid-containing mouthwash user with bulging cheeks grimacing and hopping around is part of a “proper use” campaign to convince the patient that if it burns, it is effective. A half-cupful is on the order of 20 -25 ml. That is the dosage amount accepted by those of ordinary skill in this art.

In my practice, unfortunately we encounter many patients with bad breath and gingivitis. As you might imagine, it is unpleasant for Dentists and Dental Hygienists to work on such patients. Bad breath is a symptom of poor oral health, and often other even more serious conditions. The mouth is the main entry to the body for bacteria. Bad oral health has been linked to heart disease as well as a host of other diseases and conditions. Even patients who use mouthwash on a regular basis often have bad breath and more serious oral tissue conditions such as gingivitis and ANUG.

Personally, because of the close working proximity to my patients, I have often used a breath spray such as Protinex to freshen my breath. After working on one or two patients, the freshness of my breath was indiscernible.

But then I tried the invention delivery system: small cotton rolls with an exterior filament mesh sheath that contain a small aliquot of the same “burning” type (boric acid containing) mouthwash. I inserted a moistened roll in each upper buccal vestibule. They are small enough to not be uncomfortable, yet contain enough medicinal fluid that when delivered to the gingival sulcus at the inner edge of the vestibule, to be truly effective. I left them in place for 20 – 30 minutes. I was able to move around, speak, drive, even drink water, without discomfort. My speech was not significantly affected, and I did not look odd. That is, my cheeks were not bulging. I found that the freshness of my breath remained, lasting throughout most of the working day after one application.

I have determined that the small rolls stimulate salivation, and the action of the buccinator muscle intermittently pushing the cotton roll against the free margin of the gingival tissue acts as a pumping mechanism to expel some of the contents of the gingival sulcus and then draw in some of the medicament from the cotton roll. The sulcus can contain a significant reservoir of bacteria that contribute to bad breath and inflammation (gingivitis) and periodontal disease. The opening and closing of the sulci by the massaging-pumping action of the inserted small, moistened rolls combined with the action of the buccinator muscles is not expected by those of ordinary skill in this field. But that action does permit delivery of the medicinal fluid into the sulci thereby being more effective. Merely swishing mouthwash around in the mouth does not

stimulate or eject the bacterial components and their toxins from the sulci. Thus, in the normal mouth rinse hygiene systems bacterial reservoirs in the sulci remain inaccessible. Bad breath returns quickly as the reservoirs have not been therapeutically treated by mouthwash rinsing.

In contrast, by opening the sulci with the invention delivery system, while at the same time stimulating salivation by the parotid and maxillary salivary glands which produce a serous ( less viscous) type of saliva as opposed to the more viscous type of the mandibular salivary glands, the mouth is more effectively washed of bacteria and debris over a longer period of time by the invention.

My study of mouth rinses has led me to conclude that the popular mouthwashes of the boric acid and benzoic acid type delivered simply by swishing a half capful around the mouth for 30 seconds or less is ineffective. They are, when delivered in that manner, merely cosmetic and palliative. The user thinks they are doing all they can, but they are not getting at the source of the problem: the reservoirs of bacteria in the sulci. In fact, they should be termed "mouth rinse" rather than "mouthwash", which implies cleaning, because they are seemingly at best, misleading.

5) I am familiar with the use of dry cotton rolls in dental procedures, including filling and gingival treatments. The purpose of the rolls is to space the inner surface of the cheeks away from the gums to give the dentist access to the teeth. In addition, they must be provided dry in order to absorb saliva of the patient, as many treatments require a dry "field" of work. In addition, these cotton rolls are large and uncomfortable. They distort the face; such rolls were used to distort the face of Marlon Brando in "The Godfather"; they also helped distort his voice. All of us who have gone to the dentist know of the "cotton mouth" feeling. This conventional use of dry cotton rolls does not teach or suggest to one of ordinary skill in this field the use of the invention's fluid-medicated cotton roll delivery system.

As soon as the dry cotton rolls used in dental procedures become wetted or saturated with saliva or rinse water, they are removed and replaced with fresh dry rolls to keep the work field dry. They are not left in place for extended periods. They are absorbing devices, not delivery platform devices for slow release of antimicrobials

6) In 1964, at the time of the Masci patent issuance, I was 34 years old, and a practicing dentist. Neither then nor since have I seen any cotton rolls with the Masci binary mixture of quaternary ammonium salts incorporated in any manner in cotton rolls, wet or dry. Cotton rolls provided in the dental field are dry, sterilized cotton, for the purpose noted in paragraph 5 above. They are not provided for treatment, but as aids to providing a clear, dry field for dental

procedures. Sterility is all that is needed. Cotton rolls to those of ordinary skill in this art are drying agents, not medication delivery agents.

I note that Masci states in Column 8, lines 2 – 29 that some water must be present for his binary mixture of dequalinium and cetyl pyridinium salts to be effective, but that they “may be incorporated in dry compositions such as antiseptic dusting powders and the like”, requiring the presence of moisture to activate them. He continues with the suggestion that the binary composition “may also be incorporated in or applied to articles such as dental aids and the like including cotton rolls”. Finally, he notes that the binary composition “have been found to adsorb to some degree [I note that the amount is not stated] on cellulose and, therefore, must be adjusted in concentration to compensate for the amount adsorbed.” Emphasis supplied.

As both one of ordinary skill in this art, and having experience and training to state what one of ordinary skill in this art would consider to be obvious, I can state that one of ordinary skill in this art would not look to Masci as a teaching of a platform for treatment of bad breath and gingivitis. One of ordinary skill in this art is not a researcher. Rather, they are practitioners. At best, Masci is merely and incidentally inviting one of ordinary skill in the art to experiment with the use of his binary composition in place of other antiseptics in this field.

At the time of Masci’s invention, and since then, no medicinal fluid laden cotton rolls were used for bad breath treatment. Nor does he teach that to one of ordinary skill in this art. Masci invites future experimentation with dry powders, and adsorbing the binary composition on cellulose. **The present invention does not involve adsorption.** At best, one of ordinary skill in the art might think of experimenting with a band-aid or tampons, on the cellulose pad of which might be adsorbed the binary salt, and then dried. Masci poses hundreds of potential possibilities for experimenters to explore as a way to say that his binary composition has many possible uses. In short, that isolated section of Masci is an incidental invitation to experimentation that does not point to the invention. Indeed, on the whole, in my view, one of ordinary skill in the art would consider Masci to be a chemical composition case, focusing on the components of the binary system and their efficacy, not on any delivery mode, or delivery articles.

The most that one of ordinary skill in the art might consider in connection with dry cotton rolls of their day to day experience is Masci’s reference to trying a “dry composition” (Col 8, line 8) “applied to articles such as dental aids and the like including cotton rolls” (Col 8, lines 13 – 15). But Masci does not state for what purpose one would put powder on a dry roll. In view of the transitory use on a daily basis of dry sterile rolls for drying the field of dental procedures, one of ordinary skill in the art would simply consider that as unnecessary and speculation, without evident purpose. Certainly it does not teach the invention

Rather, one of ordinary skill in the art would focus on the Masci, teaching that: “The majority of the antiseptic compositions incorporating the active ingredients of the invention will, however, be aqueous solutions. Such solutions may contain substantial amounts of other materials such as alcohol, glycerine and the like or any other substances which does not destroy the antimicrobial activity of the compositions. The invention, therefore, contemplates the recited combination of the active ingredients [dequalinium and cetyl pyridinium salts] either by themselves or incorporated in any pharmaceutically acceptable carrier” (Col 8, lines 20 – 29). One of ordinary skill in this art would consider a “pharmaceutically acceptable carrier” to mean a salve or a cream, not cotton rolls. The use of aqueous solutions by themselves or in a pharmaceutically acceptable carrier is the dominant teaching; and that is a distinctly different alternative than dry powder. That would focus one of ordinary skill in the art on the latter two and not the dry powder. Even so, an aqueous solution per se is not the invention.

Indeed, cetyl pyridinium chloride is such a ubiquitous anti-microbial today, found in tooth paste, mouth rinses, shampoo, bar soap, hand sanitizers and the like, that one of ordinary skill in this art would merely view Masci to be of historical interest as teaching, in 1964, the discovery of the binary salts as effective antimicrobials. *But Masci did not teach the underlying discovery here that has led to a specifically structured product; the discovery that targeted delivery, via cotton rolls designed and sized for specific locus in the body and laden with a specific aliquot portion of antimicrobial fluid, is truly effective against bad breath conditions.*

In my analysis, the Examiner is focused on the chemistry of antimicrobials. But this invention is not about antimicrobials per se. And finding a particular antimicrobial per se in the literature or commercial use in one delivery system, say for a mouth rinse, does not mean ALL delivery systems are obvious to one of ordinary skill in the art. Indeed, the ubiquitous advertising of consumer mouthwashes so focuses those of ordinary skill in the art on an **UNTARGETED, NO-PLATFORM** approach, that the use of cotton rolls of specific size with a specific aliquot of antimicrobial as a platform for targeted delivery is not obvious to one of ordinary skill in the art. That is to say, the art says, repeatedly and loudly, that using the antimicrobial as a whole mouth mouthwash is **THE** way to administer for treatment, that one of ordinary skill in the art would not consider any other way (delivery system) to be obvious. It is fair to conclude that one of ordinary skill in the art would not be able to pick out only fluid antimicrobial solution in a cotton roll as a target delivery system in view of the whole mouth rinse application commandment, and knowing that cotton rolls are used only dry in connection with oral conditions.

Indeed, even if one of ordinary skill in the art might focus on the specific dry powders and cotton rolls section of Masci, which I conclude would not be the case, they would seize on the

teaching of incorporating the Masci binary quaternary mixture “in dry compositions such as antiseptic dusting powders and the like” Col 8, lines 8 and 9 or treat cellulose products, such as band-aids or tampons, with some unknown concentration of the binary compound and then dry them. None of those are the invention.

7) Vermeer is a Lever Brothers patent directed to creation of a thick viscous, stable foam for tooth paste and mouth rinses by use of an aldonamide as a foam stabilizer and viscosity modifier. It is a chemical patent. The focus of the patent is on loosening and removal of plaque from teeth. In columns 3 and 4 he talks about use of the aldonamides to “create a desirable rich foam” (Col 3, lines 37, 38). Certain oral hygiene compositions such as dentifrices should “be thick and viscous” (Col 3, lines 57, 58) and should be stable, which he defines as “a water clear solution which is capable of undergoing prolonged storage under reduced temperature” (Col 3, lines 62 – 64). He then concludes in Col 4, lines 8 – 12, that “Accordingly, it is a minimum criterion that stable oral hygiene compositions (e.g. mouthwashes, dental rinses etc.) of the instant invention be water clear and remain so under conditions of low temperature storage for extended periods.” In column 10, lines 4 – 11 he provides a long list of oral hygiene compositions to which the aldonamide can be used as a detergent, naming mouthwashes, dental rinses and toothpaste.

It is my opinion that any thick, viscous foam may be acceptable for a toothpaste but totally unacceptable in a mouth wash or rinse as mentioned above. In gingival diseases such as advanced gingivitis or ANUG, the composition of the saliva becomes thick and ropery. Such thick ropery saliva prevents access to bacteria and their toxins in the gingival sulci. Contrary to adding a thick, viscous foam to such thick saliva, treatment requires a thin and serous fluid to dilute and neutralize the heavy salivary coating of the gingival tissue. Thus one of ordinary skill in the art would not add a thickening agent to a mouthwash, especially for treatment of gingivitis and I know of no thick viscous mouthwash on the market today for that reason.

One of ordinary skill in this art might, upon consideration of Masci in view of Vermeer, be directed to adding the aldonamide of Vermeer to the binary dequalinium and cetyl pyridinium salts compositions of Masci in toothpaste compositions. Since a foam is not a benefit in a dry composition, one of ordinary skill in the art would not even consider dry cotton rolls, much less applying a limited aliquot to a special sized cotton roll as a targeted delivery system. After all, according to Vermeer, the foaming properties of the aldonamide “serves as a vehicle to suspend bacteria and other micro-organisms during the rinse cycle” Col 3, lines 44, 45. Thus, at best, one of ordinary skill in the art would consider the obvious combination to be the aldonamide plus the

dequalinium and cetyl pyridinium salts in a toothpaste. That is not the targeted delivery system of the invention. That combination of teachings does NOT point to the invention. Rather, it points away, focusing on the anti-microbial composition in a toothpaste, not the combination in a special size of cotton roll of a limited aliquot as a targeted delivery system for a special application.

One of ordinary skill in the art would easily get lost in the 122 examples of products in the 104-column patent. It is a PhD thesis of organic chemistry. It is a huge haystack in which one of ordinary skill in the art is easily and thoroughly lost. What teaching to pull out of Vermeer is not evident without some foreknowledge of what to look for to combine with Masci. Since Masci talks about antimicrobials while Vermeer talks about aldonamides as suspension agents (foams), the best that can be generated out of the combination is to suspend the microbes using the Vermeer aldonamide so the Masci binary dequalinium and cetyl pyridinium salts do the bactericidal work. But again, the delivery system is a whole mouth mouthwash, mouth rinse, toothpaste or the like (and probably not the first two), not the targeted delivery system of the invention.

The mere recitation of a particular antimicrobial does not teach a specific, tailored delivery system combination. Even if a mouth wash and/or toothpaste are considered to be delivery systems, both are radically different than the invention. The antimicrobial chemical does not know how to get to the microbes, nor how it got there. It does its job. But naming the compound does not automatically teach one of ordinary skill in the art how best to deliver it. The best delivery system known to one of ordinary skill in the art for bad breath control is to suspend the antimicrobial in a mouthwash. But that is not targeted, does not open the sulci "home" for bacterial incubation, does not allow slow release for extended treatment times, is not portable, and is neither as effective as the delivery system of the invention, nor does it permit ordinary activities such as speaking.

8) Wiesel is simply directed to teeth whitening strips having a catalyst, an oxygen radical-generating agent such as a peroxide, and a buffer. One edge of the strips is scalloped so as to NOT contact the gums (Col 5, lines 34, 35). The strips are applied directly to the teeth and irradiated with heat or laser light to accelerate the bleaching effect. In fact, there is a pre-cleaning step: the teeth are pre-cleaned using a mixture of pumice and 2% peroxide. Then "the pumice is wiped down using only a dry piece of cotton. No water should be applied to the teeth at any time during the procedure", (Col 6, lines 80 – 83).

It is not clear to me, and would not be clear to one of ordinary skill in the art, why this patent is cited. At best, it directs one of ordinary skill in the art toward the Vermeer teaching of plaque removal by use of the foam. Perhaps the combination might be to add the aldonamide of Vermeer to the pumice/2% hydroxide mixture in the teeth pre-cleaning step to assist in the removal of plaque before whitening. But that is not the invention. It adds a complication, not clarity. It reinforces the ideas of going down a different path. It does not bring one of ordinary skill in the art any closer to the claimed invention's combination.

9) Julius is directed to a dry, 3-layer compressed-flat sponge, used dry in an oral cavity in place of a cotton roll to absorb saliva. It "expands to several times its compressed size" Col 3, lines 17, 18. During expansion, it changes shape from the flat of Figs 1, 3 and 6 into the 8-shape (in cross section) that is described as nearly round. Julius is merely a dry sponge in place of dry cotton rolls used for the conventional purpose, to keep the filed of procedure dry; the sponges, dried and flattened, pack smaller. The invention does not use a dry sponge. Indeed, Julius convincingly tells one of ordinary skill in the art to discard any notion that might be gleaned from Masci, to use a cotton roll. Julius states, in Col 1 lines 16 – 27 (emphasis supplied):

In the past, the dental profession has employed the use of cotton rolls to absorb saliva in the oral cavity, while work was being performed therein. However, the main disadvantage of cotton rolls is that they do not absorb large volumes of fluid and therefore, must be replaced several times during the dental procedures.

In addition, the cotton rolls tend to leave lint in the oral cavity when they are extracted; and thereby create a condition whereby the lint may be adhesively attached to the dental work and provide minute openings through which decay or other problems may subsequently arise.

This is corroboration of my declaration: that cotton rolls are used dry to absorb saliva during dental work and not for other purposes. It also points out that they have limited absorption capability and leave lint. Thus, one of ordinary skill in the art would not consider them as having the capacity for treatment when the accepted dosage of mouthwash is 20 – 50 mls, that is, a half to one capful of mouthwash.

I conclude that Julius supports the non-obviousness of the inventive system. It teaches one of ordinary skill in the art that cotton rolls should not be used in the oral cavity. They leave lint and they don't have carrying capacity to be a delivery platform. Thus, the fact that the small rolls of the invention with the defined small aliquot of anti-microbial fluid prove to be highly effective is clearly a result that one of ordinary skill in the art would not expect.



10) Speaker is not inconsistent with the above conclusions. Speaker merely teaches that one method of treating gingivitis (he spells it "gingevitis") is a "very elaborate and somewhat uncomfortable" (Col 1, line 53, 54) surgical procedure, to temporarily implant "in the periodontal sulcus one or more coils of antibiotic impregnated cotton or braided nylon cord" Col 1, lines 55 - 57. He further reports that "Application of this implant can cause considerable discomfort to the patient and often multiple implantations are required." Col 1, lines 61 - 63.

The treatment referred-to in Speaker is a surgical procedure directed to periodontitis, not gingivitis. The reference to "periodontal sulcus" indicates a pathologic condition: a 3 - 5 mm deep detachment of the tissue from the teeth and jawbone, accompanied by bone loss. Speaker is clear in stating that is an undesirable prior practice that his topical gel system is designed to avoid. However, he does not point to cotton rolls as a delivery system for bad breath and gingivitis treatment.

Speaker's solution is to provide a Lewis acid-Lewis base salt of micro-particle form in a thermogel type gel-forming agent. Thus, Speaker teaches abandoning any idea of cotton cord. One of ordinary skill in the art would recognize the implantation of dry cord in the sulcus to be a surgical procedure. Speaker does not teach anything but antibiotics, dry cord and surgical implantation "in the periodontal sulcus". It does teach that his micro-particles are slow release and can be topically applied in a gel, but omits telling us where, when, for what length of treatment, for what conditions. The invention does not do either what Speaker does, or what it reports is the current gingivitis surgical procedure.. The invention does not put rolls in the sulcus. It puts them in the buccal vestibule. It is not surgical. The rolls are not dry. They are not cord. They are not implanted. At best this reference teaches one of ordinary skill in the art that a gel is a delivery system for a specific micro-particulate composition. It further teaches away from the invention, and does not clarify the other references. Rather it simply adds confusion of one more area for one of ordinary skill in the art to explore that is NOT the invention, does not lead to the invention, and, indeed, leads one further away from the invention.

11) Copelan is directed to a dry cotton pad of size 3" x 4" as a dentifrice carrier, only a portion of which is placed in the mouth, to clean the tongue and teeth. Only 30% of the membrane should be saturated with the active ingredients and then dried (Col 3, lines 1 - 11). The untreated cotton sheet material is used to wipe the residue of the cleaning agents impregnated in the 30% portion. In the package embodiment of Figs. 10 and 11, a wedge shaped device made of polystyrene foam on a handle is packaged "in a sealed, but not necessarily vapor tight bag or packet" Col 2, lines 61, 62. One of ordinary skill in this art would view Copelan as clearly focused on dental hygiene and tongue cleaning.

What Copelan adds to the mix of references is a clear direction to one of ordinary skill in the art is that if you want "an effective and socially acceptable assembly for use in public for performing regular dental hygiene" (Col 2, lines 41 – 43), it should be dry. She states that she studied the needs for dental hygiene in public that was private and did not need water supply, Col 2, lines 41 – 48. She then concludes about her examination of the needs, Col 2, lines 48 – 53: "In doing so, we came to the conclusion that a dry, or nearly dry composition fabric of impregnated cleaning agents, dehydrated and/or impregnated upon and into a membrane, was needed to clean and polish the teeth and clean and refresh the gums, tongue and surrounding mucosa of the mouth." With respect to packaging, this patent teaches that having a dry pad or "membrane" "can be carried in a sealed, but not necessarily vapor tight bag or packet and remain effective for prolonged periods of storage" (Col 2 lines 61 – 63).

So, one of ordinary skill in the art would be taught by Copelan to go dry, large, add a handle to permit manipulation, and package it in a simple, non-vapor impervious, bag. This clearly teaches away from the inventive solution. It does not talk about moistened cotton rolls, buccal vestibules, bad breath or gingivitis, small size, or pocket-sized packaging.

12) While I believe I have addressed the various combinations of references, all the rejections rely on the combination of the Masci and Vermeer patents which I discuss in paragraphs 6 and 7 above. In my opinion, one of ordinary skill in the art might be directed to try mixing an aldonamide of Vermeer with the binary dequalinium and cetyl pyridinium salts to see if they are compatible for a whole mouth mouthwash, mouth rinse, toothpaste or the like, not the targeted delivery system of the invention. The mere recitation of a particular antimicrobial does not teach a specific, tailored delivery system combination. To the extent that a mouthwash or toothpaste is a delivery system, they are very, and different than the invention. In my opinion, in view of the teeth whitening strips of Wiesel, the dry, flattened sponges of Julius, the micro-particulates in gell of Speaker, and the dry polystyrene wedge-shaped sponge-on-a-stick of Copelan, one of ordinary skill in the art would not be directed to the fluid-containing cotton rolls of the invention.

In my opinion, it is not obvious to one of ordinary skill in this art what teachings should be picked out of the references and what should be ignored. In my opinion, one of ordinary skill in this art looks to the principal teachings, the main points and the preferred examples of the references. We are not talking here about an Einstein, nor a research PhD to explore all the thousands of alternatives that might be gleaned from the references. We are talking about someone who has ordinary, not extraordinary, familiarity with this art. Such a person is not a patent examiner but rather one of ordinary skill in this art such as the dental hygienist or dentist

that has day to day familiarity with the products and procedures in this field. To such a person, the targeted, small fluid-containing roll delivery system of the invention is not obvious, particularly in view of the unexpected results of efficacy at such low dosages.

13) I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the patent to which this verified statement is directed.

14) My Curriculum Vita follows (1 page)

Dr. Milo R. Novotny

Date: February 09, 2007

  
Milo R. Novotny, DDS

**Curriculum Vita**  
**Milo R. Novotny D.D.S.**

Born Chelsea, Ia. 12/18/1930

Graduated Belle Plaine High School, Belle Plaine Ia. 1948

Graduated University of Iowa College of Dentistry 1959

Opened first dental practice in New Smyrna Beach, Fl. 1959

Prosthetic associate Miami, Fl. with Dr. Kelly Gieger 1961-1962

General Dental and Oral Surgery practice with Dr.s Robert and Fred Tesher Hollywood Fl.  
1962-1968.

Surgery included approximately 6,000 impacted wisdom teeth, numerous alveolectomies, tori removals, gingival and periodontal surgeries and general dental extractions under general anesthesia with Dr. Fred Tesher D.D.S.-anesthesiologist.

Solo general practice Hollywood, Fl. 1968-1980.

Practice included broad range of dental disciplines including restorative, cosmetic, root canal therapy, surgery, gingival transplants and intrabony dental implants including administration of general IV sedation.

Sabatical 1980-1982

General dentistry practice Pasco Dental Center, New Port Richey, Fl. 1982-1985. Full range of dental services.

Co-owner, operator-manager and practitioner of Seminole Dental Centers, Orlando, Fl. 1985-1996. Full range of dental services.

Retirement: Partial, as I continue to fill in for former colleagues in general Dentistry.

Opened and practiced at S'Klallam Tribal Family Dental Clinic, Sequim, WA. 2004-2007.

Member of The Academy of 100, College of Dentistry, University of Florida.